

### Abstract of the Disclosure

Paper pulp is added to a stain solution. The stain solution and pulp fibers are mixed to form a slurry. Samples are removed from the slurry and are admixed with dilution water and a bleach. Then, the fibers are moved into a flow cell where they are subjected to a light source adapted to stimulate fluorescence from the stained pulp fiber. Before the fiber slurry enters the flow cell it is mixed with a dilution water of bleach to reduce background fluorescence. The fluorescent light is collimated and directed through a dichroic filter onto a fluorescence splitting dichroic filter.